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WRB-IP LLP 1217 KING STREET ALEXANDRIA, VA 22314				
EXAMINER BARTOSIK, ANTHONY N				
ART UNIT 3635		PAPER NUMBER		
NOTIFICATION DATE 12/02/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/779,632

Applicant(s)

ZEIGLER, THEODORE R.

Examiner

ANTHONY N. BARTOSIK

Art Unit

3635

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-19 is/are allowed.
- 6) ☒ Claim(s) 1-16 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed November 13, 2007, with respect to the rejection(s) of claim(s) 1-16, 20-22, and 25 under *Trochman*, *Price*, *Zeigler* have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Trochman* and *Price*, as well as a separate rejection under *Xu*, below. Accordingly, the finality of the previous rejection is withdrawn and a new Non-Final is therefore issued.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The features not shown within the drawing is the connection member and how it connects the struts 37a and 37b to struts 33a and 33b at the same connection point. Therefore, this connection must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification lacks proper disclosure pertaining to the compression forces and how they are increased and/or decreased during use. The Examiner disagrees with Applicant's claim that the subject matter of claim 25 is inherent. For something to be inherent, it must happen each and every time with no alternatives. In this case it is possible to pull up on the at least two struts causing the at least two locking struts to move toward the line extending between the connection points. This action would cause the compression to decrease as the struts are moved towards the line and increase as it is moved away. The disclosure does not

limit the user to only pulling up on the at least two locking struts only, and would not therefore be inherent.

2. Claim 25 is further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner is under the impression that the compression forces of claim 25 would increase from the "folded position" and not the "expanded position" as set forth in claim 25. See lines 1 and 2 of claim 25.

Allowable Subject Matter

3. Claims 17-19 are allowed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 4, 5, 10, 11, 12, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu (US 6,196,242).**

6. In Re claim 1, Figures 1 and 1A of Xu disclose a first hub (13);

at least two struts (15, Col. 2, Lns. 44-46 – 2 of the 7) pivotably connected at first ends thereof to the first hub(13) and movable relative to each another between a folded position and an expanded position;

a tension (20) member adapted to limit pivotable movement of the at least two struts such that,

when in the expanded position, the at least two struts define an angle of less than 180°; a locking hub (18); and

at least two locking struts (16, Col. 2, Lns. 44-46 – 2 of the 7) pivotably connected at first ends thereof to the locking hub (18) and, at second ends thereof, to connection points (@ 14) on respective ones of the at least two struts (15).

The Examiner is interpreting the hub (18) to be a locking hub since the hub interacts with the center post and is prevented from moving upwards past a certain point.

7. In Re claim 4, Figure 7A of Xu discloses a cover (41).
8. In Re claim 5, Figure 5 of Xu discloses a base (26) the tension member is attached to.
9. In Re claim 10, Col. 2, Lns. 44-46 of Xu discloses at least three struts.
10. In Re claim 11, Col. 2, Lns. 44-46 of Xu discloses at least four struts.

11. In Re claim 25, Xu discloses the limitations of claim 25 in so much as the limitations of claim 25 are considered functional. The claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended function, it meets the limitations of the claim. Since the above combination is capable of functioning as claimed it satisfies the limitations of the claim.

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 2, 3, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu (US 6,196,242).

14. In Re claim 2, Xu discloses a tension member, but the tension member is a rope and not a wire. It would have been obvious to one skilled in the art at the time of the

invention to use a wire instead of a string since such a modification would be a simple substitution of one known element for another to obtain predictable results.

15. In Re claim 3, Xu teaches the wire being attached to the at least two struts through its connection of the complete structure.

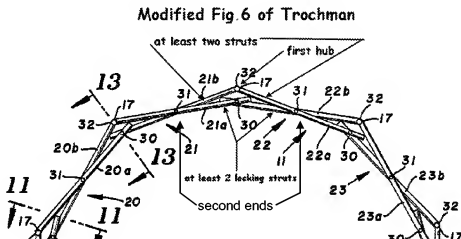
16. In Re claim 6, Xu discloses the basic claim structure of the instant application but does not disclose specific dimensions. Applicant fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

17. In Re claim 7, when Xu is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met.

18. In Re claim 8, when Xu is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met. Furthermore, a change of size is generally recognized as being within the level of ordinary skill in the art. MPEP 2144.04.

Claim Rejections - 35 USC § 103

19. Claims 1-16, 20-22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trochman (US 4,193,414) in view of Price (US 2003/0164185 A1).



20. In Re claim 1, Figure 4 and 6 of Trochman teach a first hub (32); at least two struts (21b, 22a from Fig. 6 above) pivotably connected at first ends thereof to the first hub (32) and movable relative to each other between a folded position and an expanded position;

a tension member (Figs. 1 and 4; Col. 6 Lines 43-49) **adapted** to limit pivotable movement of the at least two struts such that, when in the expanded position, the at least two struts define an angle of less than 180 degrees as well as

at least two locking struts (see Fig. 6 above) pivotably connected at first ends thereof (30) to a hub, and at second ends therefore, to connection points (see Fig. 6 above) on respective ones of the at least two struts.

Trochman fails to teach a locking hub, however Price teaches the use of locking hubs. Figures 4 and 5 as well as Paragraphs 71 and 72 of Price teach the use of locking hubs (208) in collapsible structures for structural rigidity and in keeping struts in their desired positions. It would have been obvious to one skilled in the art at the time of the invention to substitute the hub (30) of Trochman with locking hub as taught by Price in order to add structural rigidity.

The Examiner notes that the "second ends" is being interpreted to be the connection points as shown above in Modified Figure 6. It is recognized that the second ends as interpreted above is not that of the present invention, however, the language of the claim does not incorporate limitations the specifically limit the scope of the claims to be only the distal end of the locking strut.

21. In Re claim 2, Figure 4 and Column 6, Lines 43-50 of Trochman discloses the tension member including a wire.

22. In Re claim 3, Column 6, Lines 43-50 of Trochman disclose a wire that is attached to the at least two struts. Since Applicant has not specified the location of the attached wire, examiner is considering the wire attached to the eyebolt in Trochman to

also be attached to "the at least two struts" by the fact that the entire structure is rigidly connected.

23. In Re claim 4, Figure 4 and Column 6, Lines 43-50 of Trochman discloses a tension member including a cover (12) attached to the collapsible structure.

24. In Re claim 5, Figure 4 of Trochman discloses a tension member including a base (17, 18) to which the collapsible structure is attached.

25. In Re claim 6, the combination of Trochman and Price, in order to function, teaches the limitations of claim 6.

26. In Re claim 7, when the combination is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met.

27. In Re claim 8, when the combination is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met. Furthermore, a change of size is generally recognized as being within the level of ordinary skill in the art. MPEP 2144.04.

28. In Re claim 9, the combination of references Trochman and Price teach locking struts that are each **adapted** to pivot through an angle greater than 90 degrees relative to the locking hub when the locking struts are moved between a folded position and a locked position. Furthermore, a change of size is generally recognized as being within the level of ordinary skill in the art. MPEP 2144.04.

29. In Re claim 10, Figure 6 of Trochman discloses at least three struts.

30. In Re claim 11, Figure 6 of Trochman discloses at least four struts.

31. In Re claim 12, Figure 6 of Trochman (see modified figure 6 above) discloses at least two second struts (20a , 23b) pivotably connected at first ends thereof to respective ones of the at least two struts,

at least two second hubs (30 – top left and right), second ends of the at least two second struts being pivotably connected to respective ones of the at least two second hubs,

at least two third struts (24c, 25c), first ends of the at least two third struts being pivotably connected to respective ones of the at least two second hubs,

at least two third hubs (32 - bottom left and right), second ends of the at least two first struts being pivotably connected to respective ones of the at least two third hubs,

at least two fourth struts (24a, 25b), first ends of the at least two fourth struts being pivotably connected to respective ones of the at least two third hubs and being pivotably connected to respective ones of the at least two third struts.

In interpreting the claims in the broadest reasonable meaning, the Examiner is considering the hubs and struts to be "connected" to the appropriate parts through the structure itself. "Connected" does not define a touching relationship between the cited hubs and struts.

32. In Re claims 13-15, the above combination is teaches the claims.

33. In Re claim 16, the combination of Trochman and Price has been discussed above and disclose the limitations from which claim 12 depends. The Examiner's interpretation of the structure set forth in claim 12 is such that the structure in claim 1 is duplicated and then attached at a central hub, thereby creating a collapsible structure square in shape. Figure 1 of Price teaches a square shaped collapsible structure utilizing a first hub (210). It would have been obvious to one skilled in the art at the time of the invention to modify the shape of Trochman to include a square structure by substituting the fist hub (32) of Trochman with the first hub as taught in Price in order to provide a more rigid structure.

34. In Re claim 20, the above combination teaches the claimed invention except for the recitation of additional struts and hubs. It would have been obvious to one skilled in

the art at the time of the invention to add additional struts and hubs in order to make a larger structure, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. MPEP 2144.04.

In interpreting the claims in the broadest reasonable meaning, the Examiner is considering the hubs and struts to be "connected" to the appropriate parts through the structure itself. Connected does not define a touching relationship between the cited hubs and struts.

35. In Re claim 21, the proposed combination of claim 20 renders the claim limitations obvious as the struts would be capable of pivoting as claimed.

36. In Re claim 22, Figure 4 and 5 of Price disclose a stop (236) for preventing the locking hub from moving beyond a locking position in the expanded position.

37. In Re claim 25, the combination of Trochman and Price teach the limitations of claim 25 in so much as the limitations of claim 25 are considered functional. The claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended function, it meets the limitations of the claim. Since the above combination is capable of functioning as claimed it satisfies the limitations of the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY N. BARTOSIK whose telephone number is (571)270-3112. The examiner can normally be reached on M-F 7:30-5:00; E.D.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard E. Chilcot, Jr./
Supervisory Patent Examiner, Art Unit 3635

Anthony Bartosik
Examiner
Art Unit 3635
